VOLUME 122, NUMBERS 1-2

(Published 22 April 2002)

Z. Henkie and R. Wawryk	1	Anomalous transport properties in thorium arsenosulphide crystals
N. Jiang	7	On detection of non-bridging oxygen in glasses by electron- energy-loss spectroscopy
G. Gumbs	11	Coupling of Bernstein modes in two- and three-dimensional plasmas and effect on their lifetimes
K. Velavan, T.M. Rajendiran, R. Venkatesan andP. Sambasiva Rao	15	Single crystal EPR of studies Ni(II) in hexaimidazole zinc(II)-dichloride tetrahydrate: a case of rhombic distortion
L.K. Vodopyanov, S.P. Kozyrev, Y.G. Sadofyev, G.G. Tarasov and A.P. Litvinchuk	21	Far-infrared analysis of lattice vibrations in ZnSe/ZnCdSe superlattices
D.V.S. Muthu, B. Chen, A.W. Sleight, J.M. Wrobel and M.B. Kruger	25	ZrW ₂ O ₈ and HfW ₂ O ₈ : band gap shifts under pressure
A. Yamamoto, T. Kido, T. Goto, Y. Chen and T. Yao	29	Bandgap renormalization of ZnO epitaxial thin films
Y. Kopelevich and P. Esquinazi	33	Thermomagnetic instability effects vs. vortex matter phase transitions in type-II superconductors
M. Hashimoto, YK. Zhou, M. Kanamura and H. Asahi	37	High temperature (>400 K) ferromagnetism in III-V-based diluted magnetic semiconductor GaCrN grown by ECR molecular-beam epitaxy
P.U. Sastry	41	Linear electro-optical properties of orthorhombic KNbO ₃
X.J. Hu, Y.B. Dai, R.B. Li, H.S. Shen and X.C. He	45	The diffusion of vacancies near a diamond (001) surface
A. Moreira dos Santos, S. Parashar, A.R. Raju, Y.S. Zhao, A.K. Cheetham and C.N.R. Rao	49	Evidence for the likely occurrence of magnetoferroelectricity in the simple perovskite, BiMnO ₃
L. Sudheendra, H.D. Chinh, A.R. Raju, A.K. Raychaudhuri and C.N.R. Rao	53	Grain size effects on charge-ordering, phase segregation and related properties of rare-earth manganates, $Nd_{0.5}A_{0.5}MnO_3$ (A = Ca or Sr)
J. Balogh, L.F. Kiss, A. Halbritter, I. Kézsmárki and G. Mihály	59	Magnetoresistance of Ag/Fe/Ag and Cr/Fe/Cr trilayers
J.L. Shen, P.N. Chen, Y.C. Lee and C.F. Cheng	65	Red-light emission in MCM-41 meso-porous nanotubes
T. Homae, K.G. Nakamura, Ki. Kondo and K. Niwase	69	Transformation to highly ordered graphite from C ₆₀ fullerene powder by shock-compression to 57 GPa studied by Raman spectroscopy
R. Brazis and J. Kossut	73	Role of magnetic fluctuations in the luminescence line width of small systems
A. Sen Gupta	79	Positron trapping in plastically deformed Cd
G.M. Rocha-Filho and A.R. Pereira	83	Dynamical skyrmions in Heisenberg two-dimensional easy-axis ferromagnets
F.T. Vasko and GQ. Hai	89	High-frequency magnetoconductivity of electrons in non-uniform heterostructures
W. Xie	95	Energy spectra of an exciton bound to a charged impurity in quantum dots
N.S. Kini, S.A. Shivashankar, A.M. Umarji, W.B. Yelon and S.K. Malik	99	Effect of synthesis route on the structure of Nd ₃ – x Ba _{3+x} - Cu ₆ O _{14-2δ} (x = 0, 1) system: a neutron diffraction study

- R. Lora-Serrano, E. Estevez-Rams, A. Penton-Madrigal, J. Fidler, R. Grossinger and J.C. Tellez
- 105 Planar faulting in rare earth–Co 2:17 alloys

A. Greco and A. Dobry

- 111 Manifestation of marginal Fermi liquid and phonon excitations in photoemission experiments of cuprate superconductors
 - I Instructions to Authors
- III Keywords

VOLUME 122, NUMBERS 3-4

(Published 17 May 2002)

H. Hosono, K. Kajihara, T. Suzuki, Y. Ikuta, L. Skuja and M. Hirano	117	Vacuum ultraviolet optical absorption band of non-bridging oxygen hole centers in SiO ₂ glass
G. Zhang, W. Duan, G. Zhou and B. Gu	121	The effects of oxygen substitution on electronic structure of single-walled carbon nanotubes
A. Kuznetsov, V. Dmitriev, L. Dubrovinsky,V. Prakapenka and HP. Weber	125	FCC-HCP phase boundary in lead
S.G. Lushnikov, F.M. Jiang and S. Kojima	129	Central peak in the vibrational spectrum of the relaxor ferro- electric lead scandotantalate
S.J. Kim, J.E. Kim and Y.S. Yang	135	Isothermal in situ observation of crystal growth in Li ₂ B ₄ O ₇ glass
A.V. Fedorov, A.V. Baranov and Y. Masumoto	139	Acoustic phonon problem in nanocrystal-dielectric matrix systems
T. Toliński, G. Chełkowska and A. Kowalczyk	145	NdNi ₄ B and DyNi ₄ B compounds studied by X-ray photo- emission spectroscopy
J.M. Mativetsky and W.R. Datars	151	Properties of alumina membrane-templated polypyrrole nano- structures
S. Müller, P. de la Presa, H. Saitovitch, P.R.J. Silva and M. Forker	155	Investigation of the magnetic hyperfine field of ¹⁸¹ Ta in the rare earth Laves phases RCo ₂
F.A. Mikailov, E. Başaran and E. Şentürk	161	Time relaxation of metastable chaotic state in TlInS ₂
S. Choi, GB. Cha, S.C. Hong, S. Cho, Y. Kim, J.B. Ketterson, SY. Jeong and GC. Yi	165	Room-temperature ferromagnetism in chalcopyrite Mn-doped ZnSnAs ₂ single crystals
H. Akiyama, L.N. Pfeiffer, A. Pinczuk, K.W. West and M. Yoshita	169	Observation of large many-body Coulomb interaction effects in a doped quantum wire
C. Xu, G. Xu, Y. Liu and G. Wang	175	A simple and novel route for the preparation of ZnO nanorods
V. Dediu, M. Murgia, F.C. Matacotta,C. Taliani and S. Barbanera	181	Room temperature spin polarized injection in organic semi- conductor
E. Morales-Sánchez, E. Prokhorov,Y. Vorobiev and J. González-Hernández	185	The nature of the crystallization nuclei in Ge ₂ Sb ₂ Te ₅ alloys
N.R. Khasanova, M.L. Kovba, S.N. Putilin, E.V. Antipov, O.I. Lebedev and G. Van Tendeloo	189	Synthesis, structure and properties of layered bismuthates: $(Ba,K)_3Bi_2O_7$ and $(Ba,K)_2BiO_4$
G.W. El Haj Moussa, Ariswan, A. Khoury, F. Guastavino, and C. Llinarés	195	Fabrication and study of photovoltaic material $CuIn_xGa_{1-x}Se_2$ bulk and thin films obtained by the technique of close-spaced vapor transport
W. Westerburg, O. Lang, C. Ritter, C. Felser, W. Tremel and G. Jakob	201	Magnetic and structural properties of the double-perovskite $\text{Ca}_2\text{FeReO}_6$
A.R. Lim, J.K. Jung, J.W. Kim and C.S. Yoon	207	^7Li and ^{133}Cs spin-lattice relaxation in a nonlinear optical crystal $\text{CsLiB}_6\text{O}_{10}$

I. Kuryliszyn, A. Stachow-Wójcik, A. Twardowski, 213 Magnetooptical study of s,p-d exchange interaction in zinc E. Janik, E. Dynowska and J. Bak-Misiuk blende $Mg_{1-x}Mn_xTe$ Z. Ma, K.A. Chao and G. He 217 Dephasing and ac oscillations in an open Aharanov-Bohm ring 223 R.A. Lewis, I.V. Bradley and M. Henini Photoconductivity of Be-doped GaAs under intense terahertz radiation T.W. Kim, D.C. Choo, D.U. Lee, M. Jung, 229 Microstructural and optical studies of multiply stacked CdSe/ J.W. Cho, K.H. Yoo, S. Lee, K.Y. Seo and ZnSe quantum-dot structures with a large ZnSe spacer thickness J.K. Furdyna K. Wang, L. Huang, L. Gao, C. Huang and L. Jin 233 An alkylated europium(III) complex for photoelectric devices I **Author Index** V Instructions to Authors VII Keywords

VOLUME 122, NUMBER 5

(Published 10 May 2002)

CONTENTS

B. Fugiel	237	Transverse polarization in triglycine sulphate ferroelectric
T. Zhou	243	Partial quantum statistics and its implications for narrow band materials
K. Tanaka, F. Sano, T. Takahashi, T. Kondo, R. Ito and K. Ema	249	Two-dimensional Wannier excitons in a layered-perovskite-type crystal $(C_6H_{13}NH_3)_2PbI_4$
A.S. Moskvin and Y.D. Panov	253	Origin of magnetoresistance anomalies in antiferromagnetic $YBa_2Cu_3O_{6+x}$
N. Souffi, M. Daouahi, L. Chahed, K. Zellama and P. Roca i Cabarrocas	259	Effect of light soaking and annealing on the stability of hydro- genated amorphous silicon films deposited using pure and highly helium diluted silane
N. Kristoffel and P. Rubin	265	Pseudogap and superconductivity gaps in a two-band model with doping-determined components
C.M. Granada, C.M. da Silva and A.A. Gomes	269	Magnetic moments of transition impurities in antiperovskites
D.J. Lockwood, JM. Baribeau, M. Noël, J.C. Zwinkels, B.J. Fogal and S.K. O'Leary	271	Optical absorption in an amorphous silicon superlattice grown by molecular beam epitaxy
V.V. Laguta, M.D. Glinchuk, R.O. Kuzian, S.N. Nokhrin, I.P. Bykov, L. Jastrabík and J. Rosa	277	Electron spin resonance of Ti ³⁺ in KTa _{0.9} Nb _{0.1} O ₃
S. Zhang, G. Kong, Y. Wang, S. Sheng and X. Liao	283	Structural characterization of stable amorphous silicon films
SP. Wan and JB. Xia	287	Impact of polarization on quasi-two-dimensional exciton and barrier-width dependence of the exciton associated transition in wurtzite III-V nitride quantum wells
	I	Instructions to Authors
	III	Keywords

VOLUME 122, NUMBER 6

(Published 17 May 2002)

CONTENTS

293 Note from Publishers and Editors

H. Yanagi, J. Tate, R. Nagarajan and A.W. Sleight Electrical and optical properties of PbCu₂O₂ G. Rixecker 299 The difficulty of isolating grain boundary components in the Mössbauer spectra of ball-milled materials: iron and silveriron alloys S.N. Yannopoulos 303 Valence-alternation pairs as a possible cause of the unexpectedly strong fast relaxations in an oxide glass Y. Zhou and S. Feng 307 Electronic spectra and third-order nonlinear properties of new structures in carbon family X.S. Wang, C.L. Wang and W.L. Zhong First-order phase transition in ferroelectric superlattice 311 described by the transverse Ising model V. Massarotti, D. Capsoni and M. Bini Stability of LiMn₂O₄ and new high temperature phases in air, O₂ 317 and N₂ K. Ryczko, G. Sęk and J. Misiewicz 323 Effect of nitrogen on the exciton binding energy in GarIn1-x-N_vAs_{1-v}/GaAs quantum well A.D. Bokare, D. Das, H. Amenitsch and A. Patnaik 329 Orientational ordering in polymorphic terepthal-bis-4-butylaniline (TBBA) S. Hébert, A. Maignan, V. Hardy, C. Martin, 335 Avalanche like field dependent magnetization of Mn-site doped M. Hervieu and B. Raveau charge-ordered manganites 341 T.T. Magkoev, G.G. Vladimirov, D. Remar and Comparative study of metal adsorption on the metal and the A.M.C. Moutinho oxide surfaces I. Kušević, Ž. Marohnić, E. Babić, Đ. Drobac, 347 Flux pinning and critical currents in polycrystalline MgB₂ X.L. Wang and S.X. Dou I Instructions to Authors III Keywords

VOLUME 122, NUMBERS 7-8

(Published 7 June 2002)

D.S. Kainth, M.N. Khalid and H.P. Hughes	351	Direct verification of the q-dependence of the Frölich inter- action
B.J. Kennedy, L. Li, R.F. Garrett, Y. Kubota and K. Kato	355	First order orthorhombic-to-tetragonal phase transition in $Sr_{0.5}Ba_{0.5}HfO_3$
L. Di Gaspare, A. Notargiacomo, F. Evangelisti, E. Palange, S. Pascarelli and J. Susini	359	X-ray scanning microscope study of strain instabilities in low mismatched SiGe alloys grown on Si(001) substrates
T. Toliński, A. Kowalczyk, A. Szlaferek, M. Timko and J. Kováč	363	Magnetic properties of hexagonal RNi ₄ B (R = Ce, Nd, Gd, Dy) compounds
D. Capsoni, M. Bini, V. Massarotti and P. Galinetto	367	Micro-Raman and X-ray diffraction study of $Y_2BaNi_{1-x}M_xO_5$ (M = Mg, Zn) polymorphs
A. Hédoux, T. Denicourt, Y. Guinet, L. Carpentier and M. Descamps	373	Conversion of the glacial state into the crystal in triphenyl phosphite
L. Bryja, M. Kubisa, K. Ryczko, J. Misiewicz, A. Larionov, M. Bayer, A. Forchel and C.B. Sorensen	379	Impurity-related emission in the photoluminescence from p- type modulation doped $Al_{1-x}Ga_xAs/GaAs$ heterostructures
K. Vijaya Sarathy and P. Sreeraj	385	Effect of ruthenium doping on the properties of $Pr_{0.5}A_{0.5}MnO_3$ (A = Ca,Sr)
D. Milivojević, B. Babić Stojić, M. Stojić, V.A. Kulbachinskii, P.D. Maryanchuk and L.A. Churilov	389	Electron paramagnetic resonance studies of $Hg_{1-x}Mn_xTe_{1-y}Se_y$

YZ. Wu, DL. Yao and ZY. Li	395	Monte-Carlo simulation of the switching behavior in ferro- electrics with dipolar defects
O. Ciftja and C. Wexler	401	Coulomb energy of quasiparticle excitations in Chern-Simons composite fermion states
A. Wójs and J.J. Quinn	407	Skyrmions in integral and fractional quantum Hall systems
R.T. Tagiyeva and M. Saglam	413	Magnetic polaritons at the junctions of magnetic superlattice and magnetic material
D.C. Kundaliya, A.A. Tulapurkar, R. Pinto, R. Kumar and R.G. Kulkarni	419	A comparative study of magnetotransport and magnetization in epitaxial La $_{0.6}$ Nd $_{0.2}$ Ca $_{0.2}$ MnO $_3$ unirradiated and heavy ion irradiated thin films
O.A.C. Nunes, A.L.A. Fonseca, F.M.S. Lima and D.A. Agrello	425	Optical transitions involving impurities in semiconductors under additional infrared laser radiation
S. Halder and S.B. Krupanidhi	429	Growth and characterization of $Ba(Zr_{0.1}Ti_{0.9})O_3$ thin films deposited by pulsed excimer laser ablation
S.G. Jayam and K. Navaneethakrishnan	433	Photoionization of donor impurities in quantum wells in an electric field
Y. Zhang, S. Jin, Y. Yang, C. Liao and C. Yan	439	Annealing effects on the phase and microstructure transformations of nanocrystalline $(ZrO_2)_{1-x}(Sc_2O_3)_x$ ($x = 0.02-0.16$) thin films deposited by sol-gel method
N. Barreau, J.C. Bernède, H. El Maliki, S. Marsillac, X. Castel and J. Pinel	445	Recent studies on In ₂ S ₃ containing oxygen thin films
Y. Uehara, T. Matsumoto and S. Ushioda	451	Identification of atoms on the Ni(110)–(2 \times 1) O surface by scanning tunneling microscope (STM) light emission spectra
P.M. Rafailov, M. Dworzak and C. Thomsen	455	Luminescence and Raman spectroscopy on MgB ₂
Q.R. Feng, X. Wang, XY. Wang and Gc. Xiong	459	In situ resistance measurements and low temperature synthesis of superconducting MgB ₂ bulk samples
S. Elgazzar, P.M. Oppeneer, SL. Drechsler, R. Hayn and H. Rosner	463	Erratum to "Calculated de Haas-van Alphen data and plasma frequencies of MgB ₂ and TaB ₂ " [Solid State Communications 121 (2002) 99–102]
	I	Author Index
	VII	Instructions to Authors
	IX	Keywords

VOLUME 122, NUMBER 9

(Published 14 June 2002)

I. Narita and T. Oku	465	Synthesis of boron nitride nanotubes by using YB6 powder
A.H. Vuorimäki, E.E. Ylinen, B. Nowak and O.J. Żogał	469	From metallic to insulating regime in Y-H(D) system: ⁸⁹ Y NMR study
J.V. Badding and T.J. Scheidemantel	473	FLAPW investigation of the stability and equation of state of rectangulated carbon
X. Chen and T. Kobayashi	479	The effect of the electron-electron interactions on localization in one-dimensional disordered model with long-range correlation
KG. Lee, BY. Yu, CH. Pyun and SI. Mho	485	Vacuum ultraviolet excitation and photoluminescence characteristics of (Y,Gd)Al ₃ (BO ₃) ₄ /Eu ³⁺
M. Shin	489	Continuous phase shift in the forced interference of edge states in the quantum Hall regime

Graphite/hydrogen reduction route to GA₂O₃ nanobelts J. Zhang and L. Zhang A.V. Skripov, A.V. Soloninin and V.N. Kozhanov 497 NMR evidence of two fractions of D atoms with different lowtemperature mobilities in C15-type TaV_2D_x and $HfMo_2D_x$ 503 Calculated elastic properties of MgB2 at the superconducting R. Abd-Shukor transition H.-D. Zhou, G. Li, S.-J. Feng, Y. Liu, T. Qian, 507 The effect of phase separation on charge ordering state in $La_{1-x}Ca_xMnO_3$ (x = 1/2, 2/3, and 3/4) X.-J. Fan and X.-G. Li O. Gogolin, G. Mshvelidze, E. Tsitsishvili, 511 Temperature dependence of exciton peak energies in CuI quan-M. Schmidt, A. Hepting and C. Klingshirn tum dots Q.F. Zhang, W.M. Liu, Z.Q. Xue and J.L. Wu 515 A new internal field-assisted photocathode based on Ag-O-Cs composite thin films I Keywords Ш Instructions to Authors

VOLUME 122, NUMBER 10

(Published 28 June 2002)

Y. Kimishima, S. Nishida, T. Mizuno, Y. Ichiyanagi and M. Uehara	519	Pressure effects on N-type ferrimagnet SmVO ₃
G. Palasantzas	523	Thickness dependent thermal capacitance of thin films with rough boundaries
D. Kaczorowski, R. Troć, T. Kagayama,F. Honda and G. Oómi	527	Effect of pressure on the electrical resistivity of UCu ₅ In single crystals
M. Zoli	531	Spectral properties of the Su-Schrieffer-Heeger model
D. Xue and K. Kitamura	537	Dielectric characterization of the defect concentration in lithium niobate single crystals
J. Zhao, B. Liu, H. Zhai, R. Zhou, G. Ni and Z. Xu	543	Mass spectrometric and first principles study of Al_nC^- clusters
C.W.A. Paschoal, A.P. Ayala, I. Guedes and JY. Gesland	549	Low-temperature phase transition in CsInF ₄
Y.Q. Wang, Z.L. Wang, J.J. Shen and A.S. Brown	553	Engineering vertically aligned InAs/GaAs quantum dot structures via anion exchange
J.S. Tse, D.D. Klug, V. Shpakov and J.R. Rodgers	557	High pressure elastic properties of solid argon from first-principles density functional and quasi-harmonic lattice dynamic calculations
M. Mouallem-Bahout, O. Peña, D. Gutierrez, P. Duran and C. Moure	561	Peculiar magnetic properties of (Dy,Ca)MnO ₃
D. Maier	565	Strain-field domain structure in Bi_2Te_3 thermoelectric materials
R.K. Nkum, M.O. Gyekye and F. Boakye	569	Normal-state dielectric and transport properties of In-doped Bi-Pb-Sr-Ca-Cu-O
	I	Keywords
	Ш	Instructions to Authors

VOLUME 122, NUMBER 11

(Published 11 July 2002)

Research	Paper
----------	-------

Research Laper		
D. Olguín, M. Cardona and A. Cantarero	575	Electron-phonon effects on the direct band gap in semiconductors: LCAO calculations
Communications		
H.I. Kang, M.H. Ha, C.J. Rho, J.H. Bahng, M. Lee, Y.H. Hwang, K.J. Kim and H.L. Park	591	Electrical properties of $In_{0.5}Ga_{0.5}P$ epilayers codoped with Ge and Te
V. Bobnar, P. Lunkenheimer, A. Loidl, E.E. Kaul and C. Geibel	595	Dielectric properties of the low dimensional vanadium oxides $BA_2V_3O_9$ and $Sr_2V_3O_9$
C. Zhong and Q. Jiang	601	Theoretical study on perpendicular magnetoelectric coupling in ferroelectromagnet system
U.K. Gautam, R. Seshadri, S. Vasudevan and A. Maignan	607	Magnetic and transport properties, and electronic structure of the layered chalcogenide AgCrSe ₂
M. Dubois, G. Froyer and D. Billaud	613	X-Ray diffraction characterization of parasexiphenylene inter- calated electrochemically with sodium
J.W. Jang, D.K. Lee, C.E. Lee, T.J. Lee, C.J. Lee and S.J. Noh	619	Metallic conductivity in bamboo-shaped multiwalled carbon nanotubes
E.S. Guimarães and E.L. Albuquerque	623	Spin canted magnetic polaritons in thin films
T.J. Bastow, M.I. Burgar and C. Maunders	629	Electric field gradients in metals: correlation of experimental results with ab initio calculation
	I	Keywords
	Ш	Instructions to Authors

VOLUME 122, NUMBER 12

(Published 15 July 2002)

H.I. Kang, J.S. Kim, M. Lee, J.H. Bahng, J.C. Choi, H.L. Park, G.C. Kim, T.W. Kim, Y.H. Hwang, S.I. Mho, S.H. Eom, Y.S. Yu, H.J. Song and W.T. Kim	633	Tunable color emission of ZnGa ₂ O ₄ :Si ⁴⁺ phosphors with enhanced brightness due to donor formation
D. Kaczorowski and Yu. Grin	637	Magnetic behavior in $CeT_{0.6}Ga_6$ (T = Ni and Cu) compounds
WY. Zhang, SY. Zhang and BG. Shen	641	Large effect of Ga addition on the magnetic properties of $Pr_2Fe_{14}B/\alpha$ -Fe-type ribbons
A.A. Puça and N.S. Almeida	645	On the physical behavior of magnetic ribbons
N. Teraguchi, A. Suzuki, Y. Nanishi, YK. Zhou, M. Hashimoto and H. Asahi	651	Room-temperature observation of ferromagnetism in diluted magnetic semiconductor GaGdN grown by RF-molecular beam epitaxy
A.J. Peter and K. Navaneethakrishnan	655	Semiconductor-metal transition in quantum well systems
Y. Takano, T. Tsubaki, C. Itoi, K. Takase and K. Sekizawa	661	Magnetization and specific heat of a ferromagnetic zigzag spin chain compound LaCrOS ₂
W.P. Ferreira, G.A. Farias, H.A. Carmona and F.M. Peeters	665	Structural transitions in a classical two-dimensional molecule system
S. Raju, K. Sivasubramanian and E. Mohandas	671	The high temperature bulk modulus of aluminium: an assessment using experimental enthalpy and thermal expansion data
		IV

H. Tanaka, K. Betsuyaku,

H. Katayama-Yoshida and T. Kawai

Perovskite alloying in SrTiO₃–(La,Sr)MnO₃ solid solution films and their electrical transport properties

I Volume Index

XI Author Index

XVII Keywords

XIX Instructions to Authors

